AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for smelting sulfidic copper concentrates, in which method copper sulfide bearing material is smelted in a smelting furnace ~~(1)~~ for creating blister copper and slag, wherein at least part ~~(3)~~ of the feed of the smelting furnace ~~(1)~~ is copper sulfide ~~(3)~~ bearing material obtained by means of sulfide bearing material ~~(2)~~ that is fed to a ~~the~~ hydrometallurgic ~~further~~ processing ~~(12, 19)~~ of the slag ~~(11)~~ created in the smelting process, wherein the hydrometallurgic processing comprises a leaching step and a conversion step, wherein:

the leaching step comprises combining the slag created in the smelting process with sulfuric acid, hydrochloric acid, or a combination of these, a copper-depleted iron sulfate solution, and an oxygen-containing gas, precipitating iron, and producing an iron-depleted copper sulfate solution;

the conversion step comprises combining the iron-depleted copper sulfate solution obtained from the leaching step with a sulfide-containing concentrate, and producing copper sulfide and an iron sulfate solution; and

wherein the iron sulfate solution is recycled from the conversion step to the leaching step.

Claims 2 to 11 (Canceled)

12. (Currently Amended) A method according to claim 1, wherein the slag ~~(11)~~ obtained from smelting is silicate bearing.

13. (Currently Amended) A method according to claim 1, wherein the slag ~~(11)~~ obtained from smelting is ferrite bearing.

14. (Currently Amended) A method according to claim 13 ~~3~~, wherein the leaching ~~(12)~~ of the slag is carried out as atmospheric leaching.

15. (Currently Amended) A method according to claim 14, wherein the leaching ~~(12)~~ of the slag is carried out at the temperature of 50-105°C.

16. (Currently Amended) A method according to claim 13 ~~3~~, wherein the leaching ~~(12)~~ of the slag is carried out in an autoclave.

17. (Currently Amended) A method according to claim 13 ~~3~~, wherein the conversion ~~(19)~~ of the copper, leached from the slag, into sulfide is carried out at the temperature of 90-200°C.

18. (Currently Amended) A method according to claim 17, wherein the conversion step ~~(19)~~ of converting the copper, leached from the slag, into sulfide is carried out at the temperature of 150-190°C.

19. (Currently Amended) A method according to claim 13 ~~3~~, wherein the leaching step (~~12~~) and the conversion step (~~19~~) are controlled by measuring and adjusting the surface state and reactions of the essential dissolving and precipitating phases, on the basis of mineral-specific potentials, impedance values and solution content values measured by mineral based electrodes.

20. (New) A method according to claim 1, wherein the sulfide-containing concentrate comprises one or more of $CuFeS_2$, $Fe_{1-x}S$, (Zn, Fe, Mn)S, PbS, NiS, or FeS.

21. (New) A method according to claim 1, wherein the copper sulfide produced in the conversion step is recycled to the smelting furnace.

22. (New) A method according to claim 1, wherein the iron sulfate solution is acidic.

23. (New) A method according to claim 1, further comprising recovering dust from a smelting exhaust gas and feeding the dust to the leaching step.

24. (New) A method according to claim 1, further comprising treating the copper-depleted iron sulfate solution to recover zinc or nickel or both, contained therein.

25. (New) A method according to claim 24, wherein the treating of the copper-depleted iron sulfate solution comprises contacting the copper-depleted iron sulfate solution with a sulfide to produce zinc sulfide, nickel sulfide, or both.